

ABSTRACT

A light-emitting device is provided. The device is with an enlarged active light-emitting region, mainly comprising a LED substrate provided with a first material layer and a second material layer on the top surface thereof in turn, and a PN junction formed between the first material layer and the second material layer naturally. Moreover, a first extended trench, allowed for passing through the second material layer and a part of the first material layer, is provided, and a first extended electrode is disposed inside the first extended trench. The electrical connection between the first extended electrode and the first electrode disposed on one part of top surface of the second material layer is made, such that the first electrode may be located at a horizontal level approximately identical to that of a second electrode equally disposed at the other part of top surface of the second material. Thus, it is possible for not only facilitating the following fabrication process, but also enlarging the active light-emitting region of the PN junction, due to the fact that a removed part of the second material layer for the formation of the first electrode required in the conventional light-emitting device is not necessary. Thereby, an effectively enhanced luminance and a prolonged service life are achieved.